



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,353	11/14/2001	William D. Wilber	A8240	6948
7590 04/16/2004				
SUGHRUE MION, PLLC 2100 Pennsylvania Avenue N.W. Washington, DC 20037-3213		EXAMINER JONES, STEPHEN E		
		ART UNIT PAPER NUMBER 2817		

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/987,353	Applicant(s) WILBER ET AL.	
	Examiner Stephen E. Jones	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/8/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

1. The declaration filed on 9/8/03 under 37 CFR 1.131 is sufficient to overcome the Ko et al. (JP2001060804A) reference and the Wang et al. (A Practical Triple-Mode Monoblock Bandpass Filter For Base Station Applications) reference.

Allowable Subject Matter

2. The indicated allowability of claims 14 and 24-35 is withdrawn in view of the newly discovered reference(s) to Ishitobi (JP09148810) and the co-pending application 09/987,376. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-7, 9, 11, 15-16, 18-22, 36-40, and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishitobi (JP 09148810, abstract cited by applicant, entire document cited by examiner).

Ishitobi teaches a block filter including: solid dielectric block that is coated with a layer of conductor (see machine translation section 10) (Claims 2, 38, 39); the block has

cut corners which increases the number of poles in the same manner as the present invention and thus results in a smaller structure in the same manner as the present invention (Claim 1); the device is a triple resonator mode (i.e. a plurality of resonators) device having probes for excitation (Claims 4, 7, 11, 15, 16, 36, 37, 40); the corners are cut orthogonal to each other and thus the modes are inherently orthogonally coupled in the same manner as the present invention (Claims 5, 6, 18, 19); and the corner cuts are in two dimensions which can arbitrarily designated as x, y, or z (Claims 9, 20-22, 42).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 3, 10, 13, and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishitobi (JP 09148810, abstract cited by applicant, entire document cited by examiner).

Ishitobi teaches a dielectric filter as described above. However, Ishitobi does not explicitly teach that the dielectric is a low loss high dielectric constant material (Claims 3, 44) or that the corner cuts are in the x, y, and z directions (Claims 10, 13, and 43).

It would have been considered obvious to one of ordinary skill in the art to have made the dielectric block of a well-known low loss dielectric loss material since it is well-known that low-losses are a desired characteristic in RF communications, and the dielectric can be considered a high dielectric constant since the term "high" is a relative term in which the dielectric is higher than some other dielectric constant value.

Also, it would have been obvious to one of routine skill in the art to have cut an additional corner of the Ishitobi device such that the device had corner cuts in the x, y, and z directions, because such a routine modification would have provided the obvious advantageous benefit of additional pre-selected modes and orientations of coupling.

8. Claims 8, 12, 14 17, 23, 41, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishitobi (JP 09148810, abstract cited by applicant, entire document cited by examiner) in view of Arakawa et al of record.

Ishitobi teaches a dielectric filter as described above. However, Ishitobi does not explicitly teach plating an interior hole and fixing a connection from the plated hole (Claims 8, 12, 17, 23, 41), that the corner cuts are on the x, y, and z axis (claim 14), or that the filter includes a second block and a waveguide links the two blocks by windows in the blocks (Claim 45).

Arakawa et al. teaches a dielectric waveguide resonator filter (Fig. 18) which includes plated holes (5) for input and output which include a connection part (3) for an external circuit (e.g. see Col. 12, lines 30-37, and the last few lines of the abstract). Arakawa also teaches in Fig. 24 two block resonators joined together by a waveguide by windows in the two blocks.

It would have been obvious to one of ordinary skill in the art to have substituted plated input/output holes having connection parts such as taught by Arakawa in place of the probes in the Ishitobi filter, because it would have provided the advantageous benefit of a coupling mechanism that reduces electromagnetic leakage (e.g. see the last few lines of the abstract), thereby suggesting the obviousness of such a modification.

Also, it would have been considered obvious to one of ordinary skill in the art to have modified the Ishitobi dielectric block to have included two blocks joined together such as taught by Arakawa, because it would have provided the well-known advantageous benefit of a sharper cutoff of the frequency characteristics, thereby suggesting the obviousness of such a modification.

Furthermore, it would have been obvious to one of routine skill in the art to have cut an additional corner of the Ishitobi/Arakawa device blocks such that the device had corner cuts in the x, y, and z directions, because such a routine modification would have provided the obvious advantageous benefit of additional pre-selected modes and orientations of coupling.

Double Patenting


9. Claims 1-45 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-62 of copending Application No. 09/987,376. Although the conflicting claims are not identical, they are not patentably distinct from each other because the co-pending application claims teach all of the subject matter of the present application but also include additional limitations.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Stephen Jones
Patent Examiner
Art Unit 2817

SEJ